

CLAIMS

1. A composition for a flame-retardant flexible polyurethane foam comprising:

(A) 100 parts by weight of a polyol component  
5 containing a polyether polyol having at least 2 hydroxyl groups and a number average molecular weight of 2,000 to 5,000;

(B) 3 to 50 parts by weight of a melamine-based flame retardant having an average particle diameter of 30 to 60  
10  $\mu\text{m}$ ;

(C) 5 to 35 parts by weight of an additive-type phosphorus-containing flame retardant;

(D) 0.01 to 2 parts by weight of a catalyst;

(E) 0.1 to 10 parts by weight of a blowing agent;

15 (F) 0.1 to 3 parts by weight of a silicone foam stabilizer; and

(G) a polyisocyanate component in an amount corresponding to an isocyanate index of 90 to 120.

2. The composition according to claim 1, wherein the  
20 polyol component contains the polyether polyol in an amount of 70% by weight or more, based on the total amount of the polyol component.

3. The composition according to claim 1, wherein the melamine-based flame retardant is at least one selected  
25 from the group consisting of melamine, melamine sulfate, melamine polyphosphate, melamine cyanurate, melamine

resins, and chlorinated melamines.

4. The composition according to claim 1, wherein the  
silicone foam stabilizer has a surface tension of 20.5 to  
22 mN/m at a temperature of 25°C and a silicon atom  
5 content not exceeding 4.7% by weight.

5. The composition according to claim 1, wherein the  
additive-type phosphorus-containing flame retardant has a  
molecular weight of 350 to 600.

6. A flame-retardant flexible polyurethane foam  
10 produced from the composition according to claim 1, the  
foam having a bulk density of 25 to 50 kg/m<sup>3</sup>.